



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Dean Engelhardt et al.

Serial No. 08/486,069

Filed: June 7, 1995

Title: **NUCLEIC ACID SEQUENCING PROCESSES  
USING NON-RADIOACTIVE MODIFIED  
OR LABELED NUCLEOTIDES OR  
NUCLEOTIDE ANALOGS, AND OTHER  
PROCESSES FOR NUCLEIC ACID  
DETECTION AND CHROMOSOMAL  
CHARACTERIZATION USING SUCH  
MODIFIED OR LABELED NUCLEO-  
TIDES OR NUCLEOTIDE ANALOGS**

Group Art Unit: 1631

Ex'r: Ardin H. Marschel, Ph.D.

#61

Plunkett  
5/30/01

527 Madison Avenue, 9<sup>th</sup> Floor  
New York, New York 10022  
March 21, 2001

**FILED BY EXPRESS MAIL**

Honorable Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**SECOND SUPPLEMENTAL INFORMATION DISCLOSURE  
STATEMENT UNDER 37 C.F.R. §§1.56 & 1.97-1.98**

Dear Sirs:

Pursuant to the provisions of 37 C.F.R. §§1.97-1.98, and in full compliance with their duty of disclosure under 37 C.F.R. §1.56, Applicants, through their attorney, are bringing the following forty-four (44) documents to the attention of the U.S. Patent and Trademark Office and the Examiner handling their above-identified application:

EXPRESS MAIL CERTIFICATE	
"Express Mail" Label No.:	EL839968865US
Deposit Date:	March 21, 2001
I hereby certify that this paper and the attachments herein are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, DC 20231.	
Ronald C. Fedus Reg. No. 44,305	Date MAR 21 2001

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2. Armstrong, V.W. and Eckstein, F., "Interaction of Substrate Analogues with *Escherichia coli* DNA-Dependent RNA Polymerase," Eur. J. Biochem **70**: 33-38 (1976) [Exhibit 2];
3. Rozovskaya, T.A. et al., "Introduction of a Fluorescent Label at the 3' - OH End of DNA and the 3' -OH End of the Growing RNA Chain," Molekulyarnaya Biologiya **11**(3): 598-610 (1977) [Exhibit 3];
4. Petrov A.I. and Sukhorukov B.I., "Spin-labeled polyribonucleotides," Nucleic Acids Research **8**(18): 4221-4234 (1980) [Exhibit 4];
5. Hiratsuka, T. and Uchida, K., "Preparation and Properties of 2' (or 3')-O-(2,4,6-Trinitrophenyl) Adenosine 5'-Triphosphate, an Analog of Adenosine Triphosphate," Biochimica et Biophysica Acta **320**: 635-647 (1973) [Exhibit 5];
6. Kourilsky et al., UK Patent Application No. GB 2 019 408A [Exhibit 6];
7. Bauman J.G.J. et al., "Rapid and High Resolution Detection of in situ Hybridisation to Polytene Chromosomes Using Fluorochrome-labeled RNA," Chromosoma (Berl.) **84**: 1-18 (1981) [Exhibit 7];
8. Bauman J.G.J. et al., "Cytochemical Hybridization with Fluorochrome-labeled RNA," J. Histochem. Cytochem. **29**: 227-237 (1981) [Exhibit 8];
9. Broker T.R. et al., "Electron microscopic visualization of tRNA genes with ferritin-avidin: biotin labels," Nucleic Acids Research **5**(2): 363-384 (1978) [Exhibit 9];
10. Sodja A. and Davidson N., "Gene mapping and gene enrichment by the avidin-biotin interaction: use of cytochrome-c as a polyamine bridge," Nucleic Acids Research **5**(2): 385-401 (1978) [Exhibit 10];
11. Kourilsky et al., German Patent Application No. De 29 15 082A1 [Exhibit 11];
12. Daniel F.B. and Behrman E.J., "Osmium (VI) Complexes of the 3',5'-Dinucleoside Monophosphates, ApU and UpA," Biochemistry **15**: 565-568 (1976) [Exhibit 12];
13. Ward et al., European Patent Application No. EP 0 063 879A2 [Exhibit 13];
14. Eberhard W. et al., "Galactopyranosyl-β(1→3')-ribonucleosides-structural evidence and synthesis," Nucleic Acids Research Symposium Series No. 9: 15-19 (1981) [Exhibit 14];
15. Saffhill, R. and Hall, J., "A Convenient Preparation of Isomerically Pure Nucleoside 5' -Monophosphates From Unprotected Nucleosides," J. Carbohydrates Nucleosides Nucleotides **8**(6): 573-583 (1981) [Exhibit 15];
16. Scherberg N.H., U.S. Patent No. 4,260,737 issued 4/7/81 [Exhibit 16];

17. Halloran, M.J. et al., "The Preparation of Nucleotide-Protein Conjugates: Carbodiimides as Coupling Agents," Journal of Immunology 96(3): 373-384 (1966) [Exhibit 17];
18. Erlanger, B.F. et al., "Antibodies Specific for Ribonucleosides and Ribonucleotides and Their Reaction with DNA," Proc. Natl. Acad. Sci. 52: 68-74 (1964) [Exhibit 18];
19. Suzuki S., et al., "The Binding Sites of Nucleosides or Nucleotides to Diethylenetriaminecobalt (III)," Bioinorganic Chemistry 3: 281-293 (1974) [Exhibit 19];
20. Petrov, A.I., "Complex formation between spin-labeled polyuridylic acid and pyrimidine nucleosides," Nucleic Acids Research 8(23): 5913-5929 (1980) [Exhibit 20];
21. Lippard, S.J., "Platinum Complexes: Probes of Polynucleotide Structure and Antitumor Drugs," Accounts of Chemical Research 11 (1978), 211-217 [Exhibit 21];
22. Manning et al., "A New Method of *in situ* Hybridization," Chromosoma (Berl.) 53 (1975), 107-117 [Exhibit 22];
23. Langer et al., "Enzymatic synthesis of biotin-labeled polynucleotides: Novel nucleic acid affinity probes," Proc. Natl. Acad. Sci. USA 78 (1981), 6633-6637 [Exhibit 23];
24. Hampton, A., "Studies of the Action of Adenylosuccinase with 6-Thio Analogues of Adenylosuccinic Acid," J. Biol. Chem. 237 (1962), 529-535 [Exhibit 24];
25. Beer, M. et al., "Biological Structure Determination Through Atomic Microscopy," Chemica Scripta 14 (1979), 263-266 [Exhibit 25];
26. Chang, C-H. et al., "Osmium-Labeled Polynucleotides. The Reaction of Osmium Tetroxide with Deoxyribonucleic Acid and Synthetic Polynucleotides in the Presence of Tertiary Nitrogen Donor Ligands," Biochemistry 16 (1977), 33-38 [Exhibit 26];
27. Brossmer et al., "Synthese von 5-( $\beta$ -D-Glucopyranosyloxymethyl)-3-( $\beta$ -D-ribofuranosyl)uracil und 3-(2-Desoxy- $\beta$ -D-ribofuranosyl)-5-( $\beta$ -D-glucopyranosyloxymethyl)uracil als Analoga eines DNA-Bausteins," Leibniz Ann. Chem. 975-981 (1974) [Exhibit 27];
28. Chheda, G.B., "Isolation and characterization of N<sup>6</sup>-succinyladenosine from human urine," Nucleic Acid Research 4:739-746 (1977) [Exhibit 28];
29. Limback et al., "Summary: the modified nucleosides of RNA," Nucleic Acids Research 22 2183-2196 (1994) [Exhibit 29];
30. Delaney, E.J. et al., "Synthesis of 5' Substituted EDTA-Like Nucleosides as Analogs of Nucleoside Phosphates," J. Carbohydrates Nucleosides Nucleotides 8 445-459 (1981) [Exhibit 30];

31. Raggazzo and Behrman, "The Reactions of Oxo-Osmium Ligand Complexes with Isopentenyl Adenine and Its Nucleoside," Bioinorganic Chem. 5 343-352 (1976) [Exhibit 31];
32. Hoard, D.E. and Ott, D.G., "Conversion of Mono- and Oligodeoxyribonucleotides to 5'-Triphosphates," J. Am. Chem. Soc. 87 1785-1788 (1965) [Exhibit 32];
33. Martell and Calvin, Chemistry of the Metal Chelate Compounds, Prentice Hall, Englewood Cliffs NJ, USA 136 [Exhibit 33];
34. Dwyer, F.W. and Mellor, D.P., Chelating Agents and Metal Chelates, 3 (1974) [Exhibit 34];
35. Dunaway-Mariano, D. and Cleland, W.W., "Preparation and Properties of Chromium(III) Adenosine 5'Triphosphate, Chromium(III) Adenosine 5'-Diphosphate, and Related Chromium(III)-Complexes," Biochemistry 19 1496-1505 (1980) [Exhibit 35];
36. Liu, Y. and Wu, C., "Radiolabeling of Monoclonal Antibodies with Metal Chelates," Pure and Applied Chem. 63 427-463 (1991) [Exhibit 36];
37. Krejcarek, G.E. and Tucker, K.L., "Covalent Attachment of Chelating Groups to Macromolecules," Biochemical and Biophysical Research Communications 77, 581-583 (1977) [Exhibit 37];
38. Sundberg et al., "Selective Binding of Metal Ions to Macromolecules Using Bifunctional Analogs of EDTA," J. Medicinal Chemistry 17 1304-1307 (1974) [Exhibit 38];
39. Dale, R.M.K. and Ward, D.C., "Direct Covalent Mercuration of Nucleotides and Polynucleotides," Biochemistry 14 2458-2469 (1975) [Exhibit 39];
40. Jeng et al., "The Use Of Aryl Azido ATP Analogs As Photo Affinity Labels For Niyosin ATPase," J. Supramolecular Structure 3: 448-468 (1975) [Exhibit 40];
41. Gottikh et al., "The General Synthetic Route To Amino Acid Esters Of Nucleotides And Nucleosides-5'-Triphosphates And Some Properties Of These Compounds," Tetrahedron 26: 4419-4433 (1970) [Exhibit 41];
42. Biochemistry, Third Edition, Stryer, L., Editor, pages 96-97 W.H. Freeman and Co., New York (1988) [Exhibit 42];
43. Karlson, Kurzes Lehrbuch der Biochemie (1972) (short textbook of biochemistry), George Thieme publishers, Stuttgart, in particular pages 169-170 [Exhibit 43];
44. Weber, S.G., U.S. Patent No. 4,293,310 [Exhibit 44];

A completed Form PTO-1449 listing the forty-four (44) above-submitted documents [Exhibits 1-44] is also attached hereto as [Exhibit 45].

A copy of each of the forty-four (44) above listed references [Exhibits 1-44] is being provided herewith for the convenience of the Examiner.

The 44 documents listed above (Exhibits 1-44) were cited in European opposition proceedings involving European Patent Nos. 0 285 057 B1 and 0 286 898 B1, which patents were granted on divisional applications with claims to different inventions from those pending in the present application.

Eight documents (Exhibits 6-7, 11, 13, 16-17 and 22-23) were previously cited or made of record in this application in Applicants' September 28, 1995 Information Disclosure Statement and, therefore, have not been included on the accompanying Form PTO-1449 (Exhibit 45). In particular, Kourilsky et al., German Patent Application No. DE 29 150 82 A1 (Exhibit 11), written in German, corresponds to Kourilsky et al., U.S. Patent No. 4,581,333, which patent was previously submitted in the aforementioned September 1995 IDS. Thus, no additional description or a translation of DE 29 150 82 A1 (Exhibit 11) has been provided.

By this voluntary citation of art, Applicants and their attorney are requesting that the documents be made of record in the instant application.

The above citation of references is not a representation that these documents constitute a complete or exhaustive listing, nor that the above listing necessarily includes the closest or most relevant references, nor are these documents necessarily a complete listing of all references known to Applicants or their attorney. It is simply a voluntary citation of references made in good faith, which is not intended to serve in any way as a substitute for the Examiner's own search.

In view of the general and specific features described and claimed in the present application, Applicants respectfully submit that the present invention is neither suggested nor disclosed by the documents referred to above and is thus patentably distinct thereover. Furthermore, Applicants do not believe, and do not submit, by the citation of these references, that these references, either by themselves or in combination with other references, render the invention prima facie obvious under any of the duty of disclosure rules.

Dean L. Engelhardt et al.

Serial No.: 08/486,069

Filed : June 7, 1995

Page 6 [(Second Supplemental Information Disclosure Statement  
Under 37 C.F.R. §§ 1.56 & 1.97-1.98) - March 21, 2001]



Applicants respectfully request that the Examiner make the above-submitted documents of record in the instant application. Applicants further request that the Examiner consider these documents as any of them may relate, however remotely, to the present application.

This Second Supplemental IDS is being filed in accordance with 37 C.F.R. § 1.97(c), that is, after the mailing date of a first action on the merits, but before the mailing date of either a Final Action or a Notice of Allowance. The Patent and Trademark Office is hereby authorized to charge the \$180.00 fee set forth in § 1.17(p) and any other fees in connection with this IDS to Deposit Account No. 05-1135, or to credit any overpayment thereto.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Ronald C. Fedus".

Ronald C. Fedus  
Registration No. 32,567  
Attorney for Applicants

ENZO DIAGNOSTICS, INC.  
c/o Enzo Biochem, Inc.  
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**



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Serial No. 08/486,069

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Group Art Unit: 1631

Ex'r: Ardin H. Marschel, Ph.D.

**COPY**

527 Madison Avenue, 9<sup>th</sup> Floor  
New York, New York 10022  
March 21, 2001

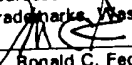
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Honorable Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**TRANSMITTAL OF SECOND SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §§1.56 & 1.97-1.98**

Dear Sirs:

Transmitted herewith is an Information Disclosure Statement which is being filed in accordance with 37 C.F.R. §§1.56 and 1.97-1.98. The items listed on Form PTO-1449, a copy of which is enclosed, may be deemed to be pertinent to the above-identified application and are made of record to assist the Patent and Trademark Office in its examination of this application. The Examiner is respectfully requested to fully consider the items and to independently ascertain their teaching.

EXPRESS MAIL CERTIFICATE	
"Express Mail" Label No.:	EL839968865US
Deposit Date:	March 21, 2001
I hereby certify that this paper and the attachments herein are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington DC 20231.	
 Ronald C. Fedus Reg. No. 44,305	MAI 21 2001 Date



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Dean Engelhardt et al.

Serial No. 08/486,069

Filed: June 7, 1995

Title: **NUCLEIC ACID SEQUENCING PROCESSES  
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Group Art Unit: 1631

Ex'r: Ardin H. Marschel, Ph.D.

527 Madison Avenue, 9<sup>th</sup> Floor  
New York, New York 10022  
March 21, 2001

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Washington, D.C. 20231

**COMMUNICATION**

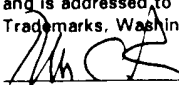
**(ACCOMPANYING SECOND SUPPLEMENTAL INFORMATION DISCLOSURE  
STATEMENT UNDER 37 C.F.R. §§1.56 & 1.97-1.98)**

Dear Sirs:

This Communication accompanies Applicants' Second Supplemental Information Disclosure Statement Under 37 C.F.R. §§1.56 & 1.97-1.98. It also follows their March 12, 2001 Communication For Transmitting Second Composite Claim Set and their March 9, 2001 Amendment Under 37 C.F.R. §1.115, the latter having been filed in response to the January 30, 2001 Office Action issued in connection with the above-identified application. No extension request or fees are believed to be due in connection with this Communication.

**EXPRESS MAIL CERTIFICATE**

"Express Mail" Label No. EL839968865US  
Deposit Date March 21, 2001  
I hereby certify that this paper and the attachments  
herein are being deposited with the United States  
Postal Service "Express Mail Post Office to Addressee"  
service under 37 CFR 1.10 on the date indicated above  
and is addressed to the Commissioner of Patents and  
Trademarks, Washington DC 20231.

  
Ronald C. Fedus  
Reg. No. 32,567

MAR 21 2001  
Date



1. ☒ For each of the following items listed on the enclosed copy of Form PTO-1449 that is not in the English language, an English language translation of that item or a portion thereof or a concise explanation of the relevance of that item is enclosed.
2. ☐ For each of the following items listed on the enclosed copy of form PTO-1449 that is not in the English language, a concise explanation of the relevance of that item is incorporated in the specification of the above-identified application.
3. ☐ Any copy of the items on the enclosed copy of Form PTO-1449 that is not enclosed with this Information Disclosure Statement was previously cited by or submitted to the Patent and Trademark Office in the prior ☐ Divisional or ☐ Continuation-In-Part application under 37 C.F.R. § 1.60, U.S. Serial No. \_\_\_\_\_, filed \_\_\_\_\_.
4. ☐ No fee is due under 37 C.F.R. § 1.17(p) for this Information Disclosure Statement since it is being filed in compliance with:
  - ☐ 37 C.F.R. § 1.97(b)(1), within three months of the filing date of the above-identified application.
  - ☐ 37 C.F.R. § 1.97(b)(2), within three months of the date of entry into the national stage as set forth in § 1.491 in an international application.
  - ☐ 37 C.F.R. § 1.97(b)(3), before the mailing date of a first Office action on the merits.
5. ☐ No fee is due under 37 C.F.R. § 1.17(p) for this Information Disclosure Statement since it is being filed in compliance with 37 C.F.R. § 1.97(c), after the period specified in paragraph 4 above but before the mailing date of a final action or a Notice of Allowance (where there has been no prior final action), and is accompanied by one of the certifications pursuant to 37 C.F.R. § 1.97(e) set forth in paragraph 9 below.
6. ☒ A fee is due under 37 C.F.R. § 1.17(p) for this Information Disclosure Statement since it is being filed in compliance with 37 C.F.R. § 1.97(c), after the period specified in paragraph 4 above but before the mailing date of a final action or a notice of allowance (where there has been no prior final action):
  - ☐ A check in the amount of \$240.00 is enclosed in payment of the fee.
  - ☒ Charge the fee to Deposit Account No. 05-1135, Order No. ENZ-5(D8)(C2). A DUPLICATE COPY OF THIS SHEET IS ATTACHED.
7. ☐ A fee is due under 37 C.F.R. § 1.17(i)(1) for this Information Disclosure Statement since it is being filed in compliance with 37 C.F.R. § 1.97(d), after the mailing date of a final action or a notice of allowance, whichever comes first, but before payment of the issue fee, and is accompanied by:
  - a. one of the certification pursuant to 37 C.F.R. § 1.97(e) set forth in paragraph 9 below; and
  - b. the attached petition requesting consideration of this Information Disclosure Statement; and

- c. the fee due under 37 C.F.R. § 1.17(i)(1) which is paid as set forth in paragraph 10 below.

8. ☐ A fee is due under 37 C.F.R. § 1.17(i)(1) for this Information Disclosure Statement since it is being filed in compliance with:

- a. ☐ 37 C.F.R. § 1.313(b)(3), after the issue fee has been paid and information cited in this Information Disclosure Statement may render at least one claim unpatentable and is accompanied by the attached Petition To Withdraw Application From Issue;
- b. ☐ 37 C.F.R. § 1.313(b)(5), after the issue fee has been paid and information cited in this Information Disclosure Statement is to be considered in a Continuation application upon abandonment of the instant application and is accompanied by the attached Petition To Withdraw Application From Issue.

- c. ☐ The fee due under 37 C.F.R. § 1.17(i)(1) is paid as set forth in paragraph 10 below.

9. ☐ I hereby certify that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ I hereby certify that no item of information in the Information Disclosure Statement filed herewith was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

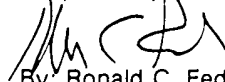
10. ☐ A check in the amount of \$130.00 is enclosed in payment of the fee due under 37 C.F.R. § 1.17(i)(1).

- ☒ Charge the fee under 37 C.F.R. § 1.17(i)(1) to Deposit Account No. 05-1135. Order No. Enz-5(D8)(C2). A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required for this Information Disclosure Statement, or credit any overpayment to Deposit Account No. 05-1135. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

MAR 21 2001  
Date

Respectfully submitted,



By: Ronald C. Fedus  
Registration No. 32,567  
Attorney for Applicants

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Dean L. Engelhardt et al.

Serial No.: 08/486,069

Filed: June 7, 1995

Page 2 [Communication Accompanying Second Supplemental IDS

- March 21, 2001]



### REMARKS

In the accompanying Second Supplemental IDS, Applicants' undersigned attorney has brought additional documents to the attention of the U.S. Patent and Trademark Office and the Patent Examiner handling their application. The documents which have been submitted as Exhibits 1-44 in the accompanying IDS were raised in two European opposition proceedings involving European Patent Nos. 0 285 057 B1 and 0 286 898 B1, which patents were granted on divisional applications with claims to different inventions from those pending in the present application. Applicants and their attorney have submitted the Second Supplemental IDS in an abundance of caution even though the documents are not believed to be material and are otherwise cumulative to any documents already of record.

In the accompanying IDS, 8 exhibits, namely Exhibits 6-7, 11, 13, 16-17 and 22-23, were previously cited or made of record in this application, and have not been included for consideration on Form PTO-1449 (Exhibit 45). Special mention should be made of Kourilsky et al., German Patent Application No. DE 29 150 82 A1 (Exhibit 11), written in German. This German document corresponds to Kourilsky et al., U.S. Patent No. 4,581,333, which patent was previously submitted in the aforementioned September 28, 1995 Information Disclosure Statement. Thus, no additional description or a translation of DE 29 150 82 A1 (Exhibit 11) has been provided. Accordingly, the completed Form PTO-1449 (Exhibit 45 of the IDS) lists only the remaining 36 exhibits, (Exhibits 1-5, 8-10, 13, 14-15, 18-21, 24-44).

Applicants respectfully request that the 36 documents listed on Form PTO-1449 (Exhibit 45) be considered and made of record in this application. If it would be helpful, Applicants are prepared to submit a brief description of these 36 documents, and would do upon the Examiner's request.

Dean L. Engelhardt et al.

Serial No.: 08/486,069

Filed: June 7, 1995

Page 3 [Communication Accompanying Second Supplemental IDS

- March 21, 2001]

If a telephone conversation would further the prosecution of the present application, Applicants' undersigned attorney request that he be contacted at the number provided below.

Respectfully submitted,



Ronald C. Fedus

Registration No. 32,567

Attorney for Applicants

**ENZO DIAGNOSTICS, INC.**

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Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office	Atty. Docket No. ENZ-5(D8)(C2)	Serial No. 08/486,069
INFORMATION DISCLOSURE CITATION (use several sheets if necessary)		
Applicants: Dean Engelhardt et al.		
Filed: June 7, 1995		Group: 1631

## U.S. PATENT DOCUMENTS

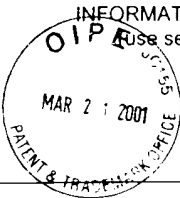
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE
	4 2 9 3 3 1 0	10/6/81	Weber	436	536	3/14/80

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANS- LATION YES NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Organic Chemistry of Nucleic Acids, Part B, Chapter 9, "Reactions of the Carbohydrate Residues of Nucleic Acids," pages 449-476, Edited by Kochetkov, N.K. and Budovskii, E.I., Plenum Press, London and New York (1972)
	Armstrong, V.W. and Eckstein, F., "Interaction of Substrate Analogues with <i>Escherichia coli</i> DNA-Dependent RNA Polymerase," <i>Eur. J. Biochem</i> 70: 33-38 (1976)
	Rozovskaya, T.A. et al., "Introduction of a Fluorescent Label at the 3'-OH End of DNA and the 3'-OH End of the Growing RNA Chain," <i>Molekulyarnaya Biologiya</i> 11(3): 598-610 (1977)
	Petrov A.I. and Sukhorukov B.I., "Spin-labeled polyribonucleotides," <i>Nucleic Acids Research</i> 8(18): 4221-4234 (1980)
	Hiratsuka, T. and Uchida, K., "Preparation and Properties of 2'-(or 3')-O-(2,4,6-Trinitrophenyl) Adenosine 5'-Triphosphate, an Analog of Adenosine Triphosphate," <i>Biochimica et Biophysica Acta</i> 320: 635-647 (1973)
	Bauman J.G.J. et al., "Cytochemical Hybridization with Fluorochrome-labeled RNA," <i>J. Histochem. Cytochem.</i> 29: 227-237 (1981)
	Broker T.R. et al., "Electron microscopic visualization of tRNA genes with ferritin-avidin: biotin labels," <i>Nucleic Acids Research</i> 5(2): 363-384 (1978)
	Sodja A. and Davidson N., "Gene mapping and gene enrichment by the avidin-biotin interaction: use of cytochrome-c as a polyamine bridge," <i>Nucleic Acids Research</i> 5(2): 385-401 (1978)
	Daniel F.B. and Behrman E.J., "Osmium (VI) Complexes of the 3',5'-Dinucleoside Monophosphates, ApU and UpA," <i>Biochemistry</i> 15: 565-568 (1976)
	Eberhard W. et al., "Galactopyranosyl-B(1' 3')-ribonucleosides-structural evidence and synthesis," <i>Nucleic Acids Research Symposium Series No. 9: 15-19 (1981)</i>
	Saffhill, R. and Hall, J., "A Convenient Preparation of Isomerically Pure Nucleoside 5' Monophosphates From Unprotected Nucleosides," <i>J. Carbohydrates Nucleosides Nucleotides</i> 8(6): 573-583 (1981)
EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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	Applicants: Dean Engelhardt et al.	
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### U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE

### FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANS- LATION YES NO

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

✓	Erlanger, B.F. et al., "Antibodies Specific for Ribonucleosides and Ribonucleotides and Their Reaction with DNA," <u>Proc. Natl. Acad. Sci.</u> 52: 68-74 (1964)
✓	Suzuki S., et al., "The Binding Sites of Nucleosides or Nucleotides to Diethylenetriaminecobalt (III)," <u>Bioinorganic Chemistry</u> 3: 281-293 (1974)
✓	Petrov, A.I., "Complex formation between spin-labeled polyuridylic acid and pyrimidine nucleosides," <u>Nucleic Acids Research</u> 8(23): 5913-5929 (1980)
✓	Lippard, S.J., "Platinum Complexes: Probes of Polynucleotide Structure and Antitumor Drugs," <u>Accounts of Chemical Research</u> 11 (1978), 211-217
✓	Hampton, A., "Studies of the Action of Adenylosuccinase with 6-Thio Analogues of Adenylosuccinic Acid," <u>J. Biol. Chem.</u> 237 (1962), 529-535
✓	Beer, M. et al., "Biological Structure Determination Through Atomic Microscopy," <u>Chemica Scripta</u> 14 (1979), 263-266
✓	Chang, C-H. et al., "Osmium-Labeled Polynucleotides. The Reaction of Osmium Tetroxide with Deoxyribonucleic Acid and Synthetic Polynucleotides in the Presence of Tertiary Nitrogen Donor Ligands," <u>Biochemistry</u> 16 (1977), 33-38
✓	Brossmer et al., "Synthese von 5-( $\alpha$ -D-Glucopyranosyloxymethyl)-3-( $\beta$ -D-ribofuranosyl)uracil und 3-(2-Desoxy- $\beta$ -D-ribofuranosyl)-5-( $\alpha$ -D-glucopyranosyloxymethyl)uracil als Analoga eines DNA-Bausteins," <u>Leibings Ann. Chem.</u> 975-981 (1974)
✓	Chheda, G.B., "Isolation and characterization of N <sup>6</sup> -succinyladenosine from human urine," <u>Nucleic Acid Research</u> 4 739-746 (1977)
✓	Limback et al., "Summary: the modified nucleosides of RNA," <u>Nucleic Acids Research</u> 22 2183-2196 (1994)
✓	Delaney, E.J. et al., "Synthesis of 5'Substituted EDTA-Like Nucleosides as Analogs of Nucleoside Phosphates," <u>J. Carbohydrates Nucleosides Nucleotides</u> 8 445-459 (1981)
✓	Raggazzo and Behrman, "The Reactions of Oxo-Osmium Ligand Complexes with Isopentenyl Adenine and Its Nucleoside," <u>Bioinorganic Chem.</u> 5 343-352 (1976)
✓	Hoard, D.E. and Ott, D.G., "Conversion of Mono- and Oligodeoxyribonucleotides to 5'-Triphosphates," <u>J. Am. Chem. Soc.</u> 87 1785-1788 (1965)
✓	Martell and Calvin, <u>Chemistry of the Metal Chelate Compounds</u> , Prentice Hall, Englewood Cliffs NJ, USA 136

EXAMINER

DATE CONSIDERED

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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRAN- SLATION YES NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Dwyer, F.W. and Mellor, D.P., <u>Chelating Agents and Metal Chelates</u> , 3 (1974)
	Dunaway-Mariano, D. and Cleland, W.W., "Preparation and Properties of Chromium(III) Adenosine 5'Triphosphate, Chromium(III) Adenosine 5'-Diphosphate, and Related Chromium(III)-Complexes," <u>Biochemistry</u> 19 1496-1505 (1980)
	Liu, Y. and Wu, C., "Radiolabeling of Monoclonal Antibodies with Metal Chelates," <u>Pure and Applied Chem.</u> 63 427-463 (1991)
	Krejcarek, G.E. and Tucker, K.L., "Covalent Attachment of Chelating Groups to Macromolecules," <u>Biochemical and Biophysical Research Communications</u> 77, 581-583 (1977)
	Sundberg et al., "Selective Binding of Metal Ions to Macromolecules Using Bifunctional Analogs of EDTA," <u>J. Medicinal Chemistry</u> 17 1304-1307 (1974)
	Dale, R.M.K. and Ward, D.C., "Direct Covalent Mercuration of Nucleotides and Polynucleotides," <u>Biochemistry</u> 14 2458-2469 (1975)
	Jeng et al., "The Use Of Aryl Azido ATP Analogs As Photo Affinity Labels For Nyosin ATPase," <u>J. Supramolecular Structure</u> 3: 448-468 (1975)
	Gottikh et al., "The General Synthetic Route To Amino Acid Esters Of Nucleotides And Nucleosides-5'-Triphosphates And Some Properties Of These Compounds," <u>Tetrahedron</u> 26: 4419-4433 (1970)
	<u>Biochemistry, Third Edition</u> , Stryer, L., Editor, pages 96-97 W.H. Freeman and Co., New York (1988)
	Karlson, Kurzes Lehrbuch der Biochemie (1972) (short textbook of biochemistry), George Thieme publishers, Stuttgart, in particular pages 169-170
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